

## EDITORIAL.

THE PUBLICATION of "state floras," when well done, has many important uses. These floras have become so numerous that almost every state is represented. Those who are preparing general manuals or are monographing groups are much interested in learning the range of their plants, a thing which herbaria seldom completely record. The artificial boundaries of states, however, are not biological boundaries, and, while they serve to divide a large area into smaller ones much more convenient to explore, they rob the term "flora" of much of any biological significance it may have. This unfortunate condition of affairs is further encouraged by the fact that the state appropriates money for such purposes to be expended only within its borders. Thus the artificial boundary line and the state appropriation have resulted in "state floras." It is well, perhaps, for local botanists to discover and record the plants of their county or their state; but it is also well to remember that this is but preliminary to a proper study of the flora. A flora in nature does not recognize state boundaries, unless those boundaries happen to be coincident with biological barriers; therefore, the real study of a flora is something which does not concern itself in general with such boundaries. We have lists of the plants of Ohio, and Indiana, and Illinois, these lists being usually styled "floras;" but we have no definite biological areas, no real floras, mapped out in these states, whose plant lists largely repeat each other. That there are such distinctive floras is often indicated in the introductory remarks which preface the lists.

IT IS NOT our intention to decry the useful work of making lists, but to urge that the time has come for the presentation of real floras. If for any reason such work must be confined to a single state, even though that state merges biologically into others on every side, that single state can be treated biologically. The prairie flora of one state, instead of being intercalated among its forest and sand-dune floras can be distinctly set apart, and left in a condition to be fitted on to its continuation in the neighboring state. The sand-dune flora of northern Indiana should never be torn violently away from that of northern Illinois and lost sight of in the forests, and swamps, and prairies, and "knobs" of Indiana. Repetition of plant names and lack of repetition in presenting these real floras are both full of significance; certainly much more so than they are in lists of neighboring states. Such

work is more difficult, naturally, and hence more valuable than the making of lists with no reference to floras. One is thoughtful classification, the other mere catalogue making. To define a biological area and then to observe not merely what plants grow upon it, but chiefly their distribution with reference to each other and to the area, is a difficult bit of field work, calling for training and good judgment, but it is correspondingly valuable.

ANOTHER DANGER in the compilation of a "state flora" is that the compiler is inclined to lay special stress upon those plants which may be new, or peculiar to the state, or rare. Such plants, it is true, are very interesting, and suggest certain things; but the enthusiasm they excite is out of all proportion to their scientific value, and is a survival of the "collector" spirit, which has in it no thought of biology. The facts of real biological significance to be observed in the study of any flora are to be obtained largely from the common and hence neglected plants. They are the species which endure diverse conditions, which vary widely, which develop divergent characters, which are full of information concerning natural selection, heredity, geographical distribution, etc. A list of plants so rare that their remains are to be found in but few herbaria may make the eyes of a collector glisten, but the biologist will take far more satisfaction in a few good observations upon the behavior of some common plant.

\* \* \*

THE GAZETTE has frequently urged American botanists to give heed to the literature of a subject before publishing upon it. Our admonition seems to be now needed in another quarter, perhaps more than in this country. For American botanists with any thorough training are aware that the activity in Europe has been so great and of such long standing that it would be foolish not to know whether a topic which presents itself for investigation has been studied before or not. We have some recent evidence, however, that our European friends are inclined to neglect the modern development of research in this country. There is excuse for this neglect, it is true; but an excuse presupposes a fault. European anatomists and physiologists may have had comparatively little reward in the past in examining American periodicals, but they must take heed that this day is passing. The men who have been stimulated to research by a German sojourn as well as those who have been inspired by their American teachers are rapidly making a literature which our German and French fellow workers cannot afford to overlook.

IN FACT a good many German botanists rather pride themselves upon their lack of attention to foreign publications, we suppose with the idea that whatever is worth knowing about a subject will either be discovered in Germany or published there. Consequently few botanical institutes are adequately supplied with foreign literature. This condition, which arises chiefly from a want of appreciation of the work of foreigners, but partly from limited linguistic training, is a reproach to any people and our German friends would do well to better it. A few, notable among whom is Prof. Dr. Goebel, recognize fully the recent advance among American workers, a recognition which we doubt not will widen as the reasons for it become more potent. But without waiting for further development the institutes at Leipzig, Bonn, Tübingen, Breslau and Strassburg might better their own researches as well as facilitate those of their American students by stocking their libraries more completely.